

WHAT IS CLAIMED IS:

9/21/7
1. A method of forming a laminated composite printed wiring structure of a plurality of at least three superimposed subcomposites comprising the steps of:

providing a plurality of organic dielectric subcomposite structures, each having openings therein and a plurality of through via openings therein extending between said faces, and wherein the via openings in each subcomposite structure are positioned to align with an opening in at least one opening in a subcomposite structure that is to be adjacent said each subcomposite structure, and printed wiring on at least one face of one subcomposite structure,

filling each via opening with a conductive paste material that can be hardened or cured with said conductive paste material extending beyond at least one face of the subcomposite structure,

providing a plurality of aligned index openings, each subcomposite structure which will cooperate with a fixture to align at least some of said via holes in adjacent components when in superimposed relationship,

providing adhesive for location between adjacent superimposed structures, said adhesive having openings for said conductive paste,

laying up said subcomposite with said adhesive material disposed there between in superposed relationship on a fixture, including elements extending through said index openings to align said subcomposite structures with conductive paste in adjacent openings in said subcomposite structures, in contact with each other; and

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fully curing said conductive paste in said adjacent subcomposite structure to form a laminated composite structure.

2. The invention as defined in claim 1 wherein said adhesive material is in the form of separate adhesive sheets.

3. The invention as defined in claim 1 wherein said via openings have plated conductive surfaces.

4. The invention as defined in claim 1 wherein said via openings are free of plating therein.

5. The invention as defined in claim 3 wherein at least some of said vias are copper plated.

6. The invention as defined in claim 1 wherein said conductive paste is partially cured or dried before the subcomposites are laminated.

7. The invention as defined in claim 1 wherein said vias are filled with said conductive paste through a mask.

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8. The invention as defined in claim 7 wherein each of said subcomposites are registered with said registration openings and said mask to fill the openings with the conductive paste.

9. The invention as defined in claim 7 wherein circuitry is applied to at least one side of at least one of said subcomposite through said mask.

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